130567

# TABLE OF CONTENTS


| | | PAGE |
|---|---|---|
| Sexual hormones in *Achlya*. VII. The hormonal mechanism in homothallic species | *John R. Raper* | 1– 24 |
| Formation and liberation of zoospores in *Isoachlya anisospora* var. *indica* | *K. S. Bhargava* | 24– 31 |
| Embryology of *Sewardiella tuberifera* Kash | *P. N. Mehra and A. L. Khanna* | 31– 42 |
| Atypical growth of plants. III. Growth responses of virus tumors of *Rumex* to certain nucleic acid components and related compounds | *Louis G. Nickell, Phyllis Greenfield, and Paul R. Burkholder* | 42– 52 |
| Inhibition of growth in maize embryos by canavanine and its reversal | *James E. Wright and Adrian M. Srb* | 52– 57 |
| Effects of exposures of seeds to various physical agents. I. Effects of brief exposures to heat and cold on germination and light-sensitivity | *S. M. Siegel* | 57– 70 |
| Effect of growth-regulating substances on the water retaining capacity of bean plants | *John W. Mitchell and Paul C. Marth* | 70– 76 |
| Herbicide effects in Connecticut vegetation, 1949 | *Frank E. Egler* | 76– 85 |
| Factors affecting the accumulation of rubber in seedling guayule plants | *H. M. Benedict* | 86– 95 |
| On the inheritance of apomixis in *Parthenium argentatum* | *D. U. Gerstel and Wm. Mishanec* | 96–106 |
| Origin, development, and morphology of the intrapetiolar stipules of *Ervatamia divaricata* | *G. C. Mitra* | 106–112 |
| Maleic hydrazide as a plant growth inhibitor | *Aubrey W. Naylor and Edwin A. Davis* | 112–126 |
| Some methods used in tracing radioactive growth-regulating substances in plants | *John W. Mitchell and Paul J. Linder* | 126–129 |
| Effect of DDT on germination of certain seeds | *H. T. Hopkins and Eben H. Toole* | 130–132 |
| Anatomical effects of *Lygus* injury to guayule | *F. T. Addicott and V. E. Romney* | 133–134 |
| Selective inhibition of the growth of green plants and fungi by beta methyl umbelliferone | *C. L. Hamner, H. M. Sell, Wm. Klomparens, and J. R. Vaughn* | 135–137 |
| A convenient method of growing fruiting-bodies of a bracket fungus | *H. P. Papazian* | 138 |
| A method of isolating the four spores from a single basidium in *Schizophyllum commune* | *H. P. Papazian* | 139–140 |
| Physiology of the incompatibility factors in *Schizophyllum commune* | *H. P. Papazian* | 143–163 |
| Gene analysis of weight per locule in tomato hybrids | *LeRoy Powers* | 163–174 |
| *Peltastrobus reedae:* a new sphenopsid cone from the Pennsylvanian of Indiana | *Robert W. Baxter* | 174–182 |
| A comparison of season of cambial growth in different geographic races of *Pinus ponderosa* | *R. F. Daubenmire* | 182–188 |

| | | PAGE |
|---|---|---|
| Effect of 2,4-D on carbohydrate and nutrient-element content and on rapidity of kill of soybean plants growing at different nitrogen levels | *Dale E. Wolf, Gertrude Vermillion, Arthur Wallace, and Gilbert H. Ahlgren* | 188–197 |
| Absorption, translocation, and persistence of 2,4-dichlorophenoxyacetic acid in some plants | *A. S. Dhillon and E. H. Lucas* | 198–207 |
| Effects of various plant growth-regulators on flowering in several crop plants | *Elroy L. Rice* | 207–213 |
| Effects of differences in phosphorus nutrition on the nitrogen content and phosphorus 32 absorption of four species of grass | *Tsung-Hsun Tsao, Glenn S. Rabideau, and W. Gordon Whaley* | 214–221 |
| Cotton-leaf malformations induced by organic phosphate insecticides | *Wayne J. McIlrath* | 221–225 |
| Effect of coconut milk on the growth *in vitro* of plant virus tumor tissue | *Louis G. Nickell* | 225–228 |
| Carotenoids of the mushroom *Cantharellus cinnabarinus* | *Francis Haxo* | 228–232 |
| Chromosomal aberrations in onion roots from plants grown in an atmosphere containing $C^{14}O_2$ | *J. M. Beal and N. J. Scully* | 232–235 |
| Effects of certain acid growth-regulating substances and their corresponding aldehydes on the growth of roots | *William Clark Ashby* | 237–250 |
| Relation of halogen position to physiological properties in the mono-, di-, and trichlorophenoxyacetic acids | *J. M. F. Leaper and J. R. Bishop* | 250–258 |
| Salt tolerance and chemical composition of Rhodes and Dallis grasses grown in sand culture | *H. G. Gauch and C. H. Wadleigh* | 259–271 |
| Some effects of maleic hydrazide on plants | *H. B. Currier, B. E. Day, and A. S. Crafts* | 272–280 |
| Response of fibrous roots of sunflower and tobacco tissue cultures to plant growth substances | *Michael Levine* | 281–289 |
| Effect of certain dyes on the growth *in vitro* of virus tumor tissue from *Rumex acetosa* | *Louis G. Nickell* | 290–293 |
| Hypertrophy from the uredial stage of bean rust | *C. E. Yarwood and Morris Cohen* | 294–300 |
| Effects of sulfur deficiency on growth and metabolism of tomato | *Scott V. Eaton* | 300–307 |
| Effect of pre-illumination on the response of split pea stems to growth substances | *Martha Kent and Willis A. Gortner* | 307–311 |
| Persistence of 2,4-D toxicity in Hawaiian soils | *Ernest K. Akamine* | 312–319 |
| Origin and nature of haustoria in *Lobelia cardinalis* | *K. Subramanyam* | 319–322 |
| Time of floral differentiation of the olive in California | *H. T. Hartmann* | 323–327 |
| A newly devised colchicine method for inducing polyploidy in rice | *D. C. Luong* | 327–329 |
| Maleic hydrazide as a sprout inhibitor for potatoes | *Ernest R. Marshall and Ora Smith* | 329–330 |
| Nuclear and cell division in *Allium cepa* as influenced by slow neutrons and X-rays | *Ellen Myrberg Rasch* | 331–348 |
| Comparative seedling characteristics of Standard crested wheatgrass and Russian wild-rye | *L. D. Potter* | 349–365 |
| Experiments on photoperiodism, dormancy, and leaf age and abscission in sugar maple | *Charles E. Olmsted* | 365–393 |
| Brown-spot disease of celery | *M. A. Smith and G. B. Ramsey* | 393–400 |

| | | PAGE |
|---|---|---|
| Inhibitory and stimulatory effects of indoleacetic acid on development of the bean hypocotyl | *George K. K. Link and Richard M. Klein* | 400–417 |
| Effects of indoleacetic acid upon growth and respiration of kidney bean | *Burlyn E. Michel* | 418–436 |
| Fruit morphology and anatomy of the cherimoya | *C. A. Schroeder* | 436–446 |
| Studies in floral morphology in the Ericales. I. Organography and vascular anatomy in the Andromedeae | *Barbara F. Palser* | 447–485 |
| The tetrasporic embryo sacs of *Plumbago coccinea*, *P. scandens*, and *Ceratostigma willmottianum* | *J. W. Boyes and E. Battaglia* | 485–489 |
| Development of the tetrasporic embryo sac of *Chrysanthemum viscosum* | *Emilio Battaglia* | 490–494 |
| The embryo sac of *Erythronium americanum* | *Ashraful Haque* | 495–500 |
| Some physiological effects of insecticides on citrus fruits and leaves | *E. T. Bartholomew, William S. Stewart, and Glenn E. Carman* | 501–510 |
| Persistence of 2,4-D stimulus in cotton plants with reference to its transmission to the seed | *Wayne J. McIlrath, D. R. Ergle, and A. A. Dunlap* | 511–518 |
| Mesquite seed and seedling response to 2,4-D and 2,4,5-T | *Byron O. Blair* | 518–521 |
| The tomato as a test plant for growth-regulators | *Wendell R. Mullison* | 521–524 |
| Chlorophyll inhibition and herbicidal action of 3-(alpha-imino-ethyl) 5-methyl tetronic acid | *C. L. Hamner and H. B. Tukey* | 525–528 |
| Nutrient solutions for orchids | *Lewis Knudson* | 528–532 |
| Negative results following exposure of several kinds of seeds to cosmic rays and other radiations at high altitudes | *J. M. Beal* | 533–534 |
| Dimorphic panicle formation in *Poa pratensis* | *E. L. Nielsen and D. C. Smith* | 534–535 |
| CURRENT LITERATURE | | 141, 236, 536 |
| For titles of books reviewed see Index under author's name | | |
| Index | | 537–542 |